

[illegible][illegible][illegible]

1. A crushing - breaking apparatus, comprising a frame having side plates facing each other and spaced apart a predetermined distance, a first cutlery device provided in said frame, said first cutlery device comprising a plurality of first projection-shaped cutleries, a second cutlery device provided in said frame, said ~~second~~<sup>1st</sup> cutlery device comprising a plurality of second projection-shaped cutleries, said plurality of second projection-shaped cutleries being disposed on said second cutlery device at locations offset relative to said first projection-shaped cutleries of said first cutlery device, first pivot means for pivotally supporting said first cutlery device, second pivot means for pivotally supporting said second cutlery device, said first cutlery device comprising a relatively upper and a relatively lower end, said second cutlery device comprising a relatively upper end and a relatively lower end, wherein said first pivot means is situated at least near said relatively upper end of said first cutlery device, wherein said second pivot means is situated at least near said relatively lower end of said second cutlery device, first abutment means effective for at times engaging said first cutlery device to thereby stop motion of said cutlery device about said first pivot means, second abutment means effective for at times engaging said second cutlery device to thereby stop motion of said second cutlery device about said second pivot means, first motor means operatively connected to said first

(Original claim 1, Continued)

cutlery device at an area thereof which is at least closer  
to said lower end of said first cutlery device than to said  
upper end of said first cutlery device, and second motor  
30 means operatively connected to said second cutlery device  
at an area thereof which is at least closer to said upper  
end of said second cutlery device than to said lower end of  
said second cutlery device, said first motor means being  
effective to pivotally move said first cutlery device about  
35 said first pivot means as to thereby move said relatively  
lower end of said first cutlery device toward said second  
cutlery device, said second motor means being effective to  
pivotally move said second cutlery device about said second  
pivot means and generally toward said first cutlery device,  
40 wherein said first cutlery device continues to so move  
toward said second cutlery device and said second cutlery  
device continues to so move toward said first cutlery device  
as to place said relatively lower end of said first cutlery  
device juxtaposed to said relatively lower end of said  
45 second cutlery device and to place said relatively upper  
ends of said first and second cutlery devices spaced from  
each other and defining an inlet for placing work to be  
crushed between said first cutlery device and said second  
cutlery device.

2. A crushing - breaking apparatus according to claim 1 and further comprising abutment means, wherein as said second cutlery device moves in a direction generally toward said first cutlery device said second cutlery device  
5 operatively engages said first cutlery device and moves said first cutlery device in a direction of movement as said second cutlery device is experiencing, and wherein said first cutlery device continues to be moved by said second cutlery device until said first cutlery device engages said  
10 abutment means.

3. A crushing - breaking apparatus according to claim 1  
and further comprising stop means, wherein as said second  
cutlery device moves in a direction generally toward said  
first cutlery device said second cutlery device operatively  
5 engages said first cutlery device and moves said first  
cutlery device in a direction of movement as said second  
cutlery device is experiencing, and wherein said first  
cutlery device continues to be moved by said second cutlery  
device until said first cutlery device engages said stop  
10 means thereby stopping movement of said first cutlery device,  
and wherein said second cutlery device continues in its  
movement generally toward said first cutlery device even  
after movement of said first cutlery device has been stopped  
by said stop means.

4. A crushing - breaking apparatus according to claim 3 and further comprising second stop means, and wherein said second cutlery device continues movement generally toward said first cutlery device after said first cutlery device has stopped in movement until said second cutlery device operatively engages said second stop means.



6. A crushing - breaking apparatus according to  
claim 1 and further comprising means for sensing whether  
said second cutlery device is applying a force against said  
first cutlery device and the work carried between said first  
5 and second cutlery devices to be of a magnitude greater than  
a preselected magnitude, second means upon said force being  
sensed to be greater than said preselected magnitude being  
effective to cause at least said second cutlery device to be  
moved as to thereby increase the space between said first  
10 and second cutlery devices to enable the work to fall  
downwardly between said first and second cutlery devices  
thereby placing the work in a location wherein a greater  
mechanical crushing advantage by at least said second  
cutlery device is attained as to crush said work without  
15 requiring said force to be of a magnitude greater than said  
preselected magnitude.



7. A crushing - breaking apparatus according to claim 1 and further comprising first means for sensing whether said second cutlery device is tending to apply a force against said first cutlery device and the work carried  
5 between said first and second cutlery devices to be a magnitude greater than a preselected magnitude, second means upon said force being sensed to be greater than said preselected magnitude being effective to cause at least said  
10 second cutlery device to be moved as to thereby increase the space between said first and second cutlery devices to enable the work to fall downwardly between said first and second cutlery devices thereby placing the work in a new location wherein a greater mechanical crushing advantage by  
15 at least said second cutlery device is attained as to crush said work without requiring said force to be a magnitude greater than said preselected magnitude, wherein after said work has been placed in said new location and said first means is again sensing that said second cutlery device is  
20 again tending to apply a force against said first cutlery device and the work carried between said first and second cutlery devices to be a magnitude again greater than said preselected magnitude, said second means upon said force being again sensed to be greater than said preselected  
25 magnitude again being effective to again cause at least said second cutlery device to be moved as to thereby again

CLAIM 7 Cont'd

increase the space between said first and second cutlery devices as to again enable the work to again fall further downwardly between said first and second cutlery devices  
30 thereby placing the work in a location different from said new location wherein a still greater mechanical crushing advantage by at least said second cutlery device is attained as to said work without requiring said force to be a magnitude greater than said preselected magnitude.